CHS

January 15, 2015

Division of Air Pollution Control
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Ave, 15th Floor
Nashville, TN 37243

Re: CHSPSC , LLC – Insignificant Source

We have a 600 kW diesel fed generator located at our 7 story office building. The unit supplies emergency power to life safety systems in the building consisting of emergency lighting, emergency power outlets, data room, and fire pump. The generator is run a total of approximately 38 hours per year for maintenance purposes.

We are requesting that this unit be classified as an insignificant source and be exempt from TN air permitting requirements, due to the size and infrequency of the use of this generator. Attached are completed forms APC – 100, 101, and 102, for your use in making a determination on our request. Thes data for the forms is form the EPA test data for that unit.

Let me know if you need additional information or have questions about our request.

Sincerely,

John Canaan
Director, Engineering Services

COMMUNITY
HEALTH
SYSTEMS

4000 Meridian Boulevard
Franklin, TN 37067
Tel: (615) 465-7000

P.O. Box 689020
Franklin, TN 37068-9020

State of Tennessee
Department of Environment and Conservation
Division of Air Pollution Control
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, TN 37243
Telephone: (615) 532-0554

NON-TITLE V PERMIT APPLICATION
FACILITY IDENTIFICATION

Please type or print and submit in duplicate for each emission source. Attach appropriate source description forms.

SITE INFORMATION

1. Organization's legal name CHSPSC, LLC		For APC use only	APC Company point no.
2. Site name (if different from legal name)			APC Log/Permit no.
3. Site address (St./Rd./Hwy.) 4000 MERIDIAN BLVD.			County name WILLIAMSON
City or distance to nearest town FRANKLIN	Zip code 37067		**4.** NAICS or SIC code 5419
5. Site location (in lat. /long.)	Latitude 35.951760		Longitude -86.810607

CONTACT INFORMATION (RESPONSIBLE PERSON)

6. Responsible person/Authorized contact JOHN CANAAN			Phone number with area code 615-465-7000
Mailing address (St./Rd./Hwy.) 4000 MERIDIAN BLVD.			Fax number with area code 615-786-8388
City FRANKLIN	State TN	Zip code 37067	Email address JOHN_CANAAN@CHS.NET

CONTACT INFORMATION (TECHNICAL)

7. Principal technical contact JOHN CANAAN			Phone number with area code 615-465-7000
Mailing address (St./Rd./Hwy.) 4000 MERIDIAN BLVD.			Fax number with area code 615-786-8388
City FRANKLIN	State TN	Zip code 37067	Email address JOHN_CANAAN@CHS.NET

CONTACT INFORMATION (BILLING)

8. Billing contact			Phone number with area code
Mailing address (St./Rd./Hwy.)			Fax number with area code
City	State	Zip code	Email address

EMISSION SOURCE INFORMATION

9. Emission source no. (number which uniquely identifies this source)
CHSPSCHQ - GEN 01

10. Brief description of emission source
Emergency generator(600 kw) to provide power for life safety services within 7 story office building.

11. Normal operation:	Hours/Day 0.5	Days/Week 1 + 1 hr/mth	Weeks/Year 52	Days/Year 64 or 38 hrs/yr
12. Percent annual throughput	Dec. – Feb. 25	March – May 25	June – August 25	Sept. – Nov. 25

(Over)

TYPE OF PERMIT REQUESTED				
13. Operating permit ( )	Date construction started	Date completed	Last permit no.	Emission source reference number
Construction permit ( )	Last permit no.		Emission source reference number	
If you choose Construction permit, then choose either New Construction, Modification, or Location transfer				
	New Construction ( )	Starting date	Completion date	
	Modification ( )	Date modification started or will start	Date completed or will complete	
	Location transfer ( )	Transfer date	Address of last location	

14. Describe changes that have been made to this equipment or operation since the last construction or operating permit application:

SIGNATURE

Based upon information and belief formed after a reasonable inquiry, I, as the responsible person of the above mentioned facility, certify that the information contained in this application and any attached application(s) is accurate and true to the best of my knowledge. As specified in TCA Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

15. Signature (application must be signed before it will be processed)		**Date**
John Canaan		01/14/15
Signer's name (type of print)	**Title**	**Phone number with area code**
JOHN CANAAN	DIR., PROJ. ENGR.	615-465-7000

Table of Pollution Reduction Device or Method Codes

Note: For cyclones, settling chambers, wet scrubbers, and electrostatic precipitators; the efficiency ranges correspond to the following percentages:
High: 95-99+%. Medium: 80-95% And Low: Less than 80%.
If the system has several pieces of connected control equipment, indicate the sequence. For example: 008'010.97%
If none of the below codes fit, use 999 as a code for other and specify in the comments.

No Equipment....000
Activated Carbon Adsorption....048
Afterburner – Direct Flame....021
Afterburner – Direct Flame with Heat Exchanger....022
Afterburner – Catalytic....019
Afterburner – Catalytic with Heat Exchanger....020
Alkalized Alumina....040
Catalytic Oxidation – Flue Gas Desulfurization....039
Cyclone – High Efficiency....007
Cyclone – Medium Efficiency....008
Cyclone – Low Efficiency....009
Dust Suppression by Chemical Stabilizers or Wetting Agents....062
Electrostatic Precipitator – High Efficiency....010
Electrostatic Precipitator – Medium Efficiency....011
Electrostatic Precipitator – Low Efficiency....012
Fabric Filter – High Temperature....016
Fabric Filter – Medium Temperature....017
Fabric Filter – Low Temperature....018
Fabric Filter – Metal Screens (Cotton Gins)....059
Flaring....023
Gas Adsorption Column -- Packed....050
Gas Adsorption Column – Tray Type....051
Gas Scrubber (General: Not Classified)....013
Limestone Injection – Dry....041
Limestone Injection – Wet....042
Liquid Filtration System....049
Mist Eliminator – High Velocity....014
Mist Eliminator – Low Velocity....015
Process Change....046
Process Enclosed....054
Process Gas Recovery....060
Settling Chamber – High Efficiency....004
Settling Chamber – Medium Efficiency....005
Settling Chamber – Low Efficiency....006
Spray Tower (Gaseous Control Only)....052
Sulfuric Acid Plant – Contact Process....043
Sulfuric Acid Plant – Double Contact Process....044
Sulfur Plant....045
Vapor Recovery System (Including Condensers, Hooding and Other Enclosures)....047
Venturi Scrubber (Gaseous Control Only)....053
Wet Scrubber – High Efficiency....001
Wet Scrubber – Medium Efficiency....002
Wet Scrubber – Low Efficiency....003
Wet Suppression by Water Sprays....061

Table of Emission Estimation Method Codes

Not application / Emissions are known to be zero....0
Emissions based on source testing....1
Emissions based on material balance using engineering expertise and knowledge of process....2
Emissions calculated using emission factors from EPA publications No. AP-42 Compilation of Air Pollution Emissions Factors....3
Judgment....4
Emissions calculated using a special emission factor different from that in AP-42....5
Other (Specify in comments)....6

State of Tennessee
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NON-TITLE V PERMIT APPLICATION
EMISSION POINT DESCRIPTION

Please type or print and submit in duplicate for each stack or emission source. Attach to the Non-Title V Facility Identification Form (APC 100).

GENERAL IDENTIFICATION AND DESCRIPTION

1. Organization name CHSPSC, LLC		For APC use only	APC Company point no.
2. Emission source no. (As on Non-Title V Facility Identification Form)	Flow diagram point number		APC Log/Permit no.
3. Brief emission point description (Attach a sketch if appropriate): Emergency generator located adjacent to south-side of office building. Unit located within sound attenuation enclosure. Serves life safety equipment in 7 story office building.			Distance to nearest property line (Ft.) Approx. 40 ft.

STACK AND EMISSION DATA

4. Stack or emission point data: →	Height above grade (Ft.) 15'	Diameter (Ft.) 0.83'	Temperature (°F) 780	% of time over 125°F	Direction of exit (Up, down or horizontal) Horizontal
Data at exit conditions: →	Flow (actual $Ft.^3$/Min.) 1720	Velocity (Ft. /Sec.)	Moisture (Grains/$Ft.^3$)		Moisture (Percent)
Data at standard conditions: →	Flow (Dry std. $Ft.^3$/Min.) 1720	Velocity (Ft. /Sec.)	Moisture (Grains/$Ft.^3$)		Moisture (Percent)

5. Air contaminants	Actual emissions						
	Emissions (Lbs./Hr.)						
	Average	Maximum	Concentration	Avg. emissions (Tons/Yr.)	Emissions est. method code	Control devices *	Control efficiency%
Particulate matter		0.0001	**	< 0.001		000, 999	
Sulfur dioxide (SO_2)			***				
Carbon monoxide (CO)		0.001	PPM	< 0.001		000, 999	
Organic compounds			PPM				
Nitrogen oxides (NO_X)		0.008	PPM	< 0.001		000, 999	
Fluorides							
Greenhouse gases (CO_2 equivalents)							
Hazardous air pollutant (specify)							
Hazardous air pollutant (specify)							
Other (specify)							
Other (specify)							
Other (specify)							

(Over)

6. Check types of monitoring and recording instruments that are attached: Opacity monitor ( ), SO_2 monitor ( ), NO_X monitor ( ), Other (specify in comments) ( )	
7. Comments	
8. Control device or Method code description:	Description of operating parameters of device (flow rate, temperature, pressure drop, etc.): 054 - Exhaust manifold connected to sound and effluent gas muffler type equipment.

* Refer to the tables below for estimation method and control device codes.

** Exit gas particulate matter concentration units: Process – Grains/Dry Standard Ft^3 (70^0F), Wood fired boilers - Grains/Dry Standard Ft^3 (70^0F), all other boilers – Lbs. /Million BTU heat input.

*** Exit gas sulfur dioxide concentrations units: Process – PPM by volume, dry bases, and boilers – Lbs. /Million BTU heat input

Table of Pollution Reduction Device or Method Codes
(Alphabetical listing)

Note: For cyclones, settling chambers, wet scrubbers, and electrostatic precipitators; the efficiency ranges correspond to the following percentages:
High: 95-99+%. Medium: 80-95% And Low: Less than 80%.
If the system has several pieces of connected control equipment, indicate the sequence. For example: 008'010.97%
If none of the below codes fit, use 999 as a code for other and specify in the comments.

No Equipment....000
Activated Carbon Adsorption....048
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Cyclone – High Efficiency....007
Cyclone – Medium Efficiency....008
Cyclone – Low Efficiency....009
Dust Suppression by Chemical Stabilizers or Wetting Agents 062
Electrostatic Precipitator – High Efficiency....010
Electrostatic Precipitator – Medium Efficiency....011
Electrostatic Precipitator – Low Efficiency....012
Fabric Filter – High Temperature....016
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Fabric Filter – Low Temperature....018
Fabric Filter – Metal Screens (Cotton Gins)....059
Flaring....023
Gas Adsorption Column -- Packed....050
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Process Change....046
Process Enclosed....054
Process Gas Recovery....060
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Spray Tower (Gaseous Control Only)....052
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Sulfuric Acid Plant – Double Contact Process....044
Sulfur Plant....045
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Judgment....4
Emissions calculated using a special emission factor different from that in AP-42....5
Other (Specify in comments)....6

Power Generation

Exhaust Emission Data Sheet
350DFEG
60 Hz Diesel Generator Set
EPA Emissions: Tier 2

Engine Information:

Model:	Cummins Inc. QSX15-G9 Nonroad 2	Bore:	5.39 in. (137 mm)
Nameplate BHP @ 1800 RPM:	750	Stroke:	6.65 in. (169 mm)
Type:	4 Cycle, In-Line, 6 Cylinder Diesel	Displacement:	912 cu. in. (14.9 liters)
Aspiration:	Turbo-charged with air-to-air charge air cooling		
Compression Ratio:	17:1		
Emission Control Device:	Turbocharged with Charge Air Cooled		

	1/4	1/2	3/4	Full	Full
PERFORMANCE DATA	**Standby**	**Standby**	**Standby**	**Standby**	**Prime**
Engine HP @ Stated Load (1800 RPM)	150	273	397	520	478
Fuel Consumption (gal/hr)	9.1	14.6	19.4	24.3	22.8
Exhaust Gas Flow (CFM)	1150	1720	2280	2610	2540
Exhaust Temperature (°F)	680	785	820	810	815
EXHAUST EMISSION DATA					
HC (Total Unburned Hydrocarbons)	0.23	0.10	0.07	0.06	0.06
NOx (Oxides of Nitrogen as NO2)	2.90	3.20	3.70	4.35	4.15
CO (Carbon Monoxide)	0.60	0.45	0.30	0.54	0.36
PM (particular Matter)	0.11	0.06	0.05	0.05	0.05
Smoke (Bierburg)	0.50	0.55	0.55	0.50	0.51
					All values are Grams per HP-Hour

TEST METHODS AND CONDITIONS

Test Methods:
Steady-State emissions recorded per ISO8178-1 during operation at rated engine speed (+/-2%) and stated constant load (+/-2%) with engine temperatures, pressures and emission rated stabilized.

Fuel Specification: 40-48 Cetane Number, 0.05 Wt.% max. Sulfur; Reference ISO8178-5, 40CFR86.1313-98 Type 2-D and ASTM D975 No. 2-D.

Reference Conditions:
25 °C (77 °F) Air Inlet Temperature, 40 °C (104 °F) Fuel Inlet Temperature, 100 kPa (29.53 in Hg) Barometric Pressure; 10.7 g/kg (75 grains H_2O/lb) of dry air Humidity (required for NOx correction); Intake Restriction set to maximum allowable limit for clean filter; Exhaust Back pressure set to maximum allowable limit.

Data was taken from a single engine test according to the test methods, fuel specification and reference conditions stated above and is subjected to instrumentation and engine-to-engine variability. Tests conducted with alternate test methods, instrumentation, fuel or reference conditions can yield different results.

Data Subject to Change Without Notice.

Power Generation

EPA Tier 2 Exhaust Emission Compliance Statement 350DFEG

60 Hz Diesel Generator Set

Compliance Information:

The engine used in this generator set complies with U.S. EPA and California emission regulations under the provisions of 40 CFR 89, Non-Road (Mobile Off Highway) Tier 2 emissions limits when tested per ISO 8178 D2.

Engine Manufacturer:	Cummins Inc.
EPA Certificate Number:	CEX-NR8-05-28
Effective Date:	08/20/2004
Date Issued:	08/20/2004
EPA Nonroad Diesel Engine Family:	5CEXL015.AAB
CARB Executive Order:	U-R-002-0254

Engine Information:

Model:	Cummins Inc. QSX15-G9 Nonroad 2	Bore:	5.39 in. (137 mm)
Engine Nameplate HP:	750		
Type:	4 Cycle, In-Line, 6 Cylinder Diesel	Stroke:	6.65 in. (169 mm)
Aspiration:	Turbo-charged with air-to-air charge air cooling	Displacement:	912 cu. in. (14.9 liters)
Compression Ratio:	17:1		
Emission Control Device:	Turbocharged with Charge Air Cooled		

U.S. Environmental Protection Agency Non-Road Tier 2 Limits

COMPONENT	(All values are Grams per HP-Hour)
NOx + HC (Oxides of Nitrogen as NO2 + Total Unburned Hydrocarbons)	4.8
CO (Carbon Monoxide)	2.6
PM (Particulate Matter)	0.15

Engine operation with excessive air intake or exhaust restriction beyond published maximum limits, or with improper maintenance, may result in elevated emission levels.

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NON-TITLE V PERMIT APPLICATION
PROCESS OR FUEL BURNING SOURCE DESCRIPTION

Please type or print and submit in duplicate and attach to the Non-Title V Facility Identification Form (APC 100).

GENERAL IDENTIFICATION AND DESCRIPTION

1. **Organization name**	For APC use only	APC Company – Point no.
CHSPSC, LLC		
2. **Emission source no.** (As on Non-Title V Facility Identification Form)		APC Log/Permit no.

3. Description of process unit

Emergency generator located adjacent to south-side of office building. Unit located within sound attenuation enclosure. Serves life safety equipment in 7 story office building.

PROCESS SOURCE DESCRIPTION AND DATA

4. Type of source	(Check only one option below)
Process Source: Apply for a separate Permit for each source. (Check at right and complete lines 5, 6, and 11)	( )
Process Source with in process fuel: Products of combustion contact materials heated. Apply for a separate permit for each source. (Check at right and complete lines 5, 6, and 8 through 11)	( )
Non-Process fuel burning source: Products of combustion do not contact materials heated. Complete this form for each boiler or fuel burner and complete a Non-Title V Emission Point Description Form (APC 101) for each stack. (Check at right and complete lines 7 to 11)	(X)

5. Type of operation: Continuous ( ) Batch ( )	Normal batch time	Normal batches/day

6. Process material inputs and In-process solid fuels	Diagram reference	Input rates (pounds/hour)	
		Design	Actual
A.			
B.			
C.			
D.			
E.			
F.			
G.			
Totals			

*** A simple process flow diagram must be attached.**

(Over)

BOILER, BURNER, GENERATOR, OR SIMILAR FUEL BURNING PROCESS DESCRIPTION

7. Boiler or burner data: (Complete lines 7 to 11 using a separate form for each boiler, burner, etc.)

Number	Stack number**	Type of firing***	Rated horsepower	Rated input capacity (10^6 BTU/Hr.)	Other rating (specify capacity and units)
CHSPSCHQ - GENO1	01	OTHER	755 HP		

Serial no.	Date constructed	Date manufactured	Date of last modification (explain in comments below)
79187667	12/06	06/06	NONE

** Source with a common stack will have the same stack number.
*** Cyclone, spreader (with or without reinjection), pulverized (wet or dry bottom, with or without reinjection), other stoker (specify type, hand fired, automatic, or other type (describe below in comments).

FUEL USED IN BOILER, BURNER, GENERATOR, OR SIMILAR FUEL BURNING SOURCE

8. Fuel data: (Complete for a process source with in process fuel or a non-process fuel burning source)

Primary fuel type (specify) LOW SULFUR, OFF ROAD DIESEL

Standby fuel type(s) (specify) NONE

Fuels used	Annual usage	Hourly usage		% Sulfur	% Ash	BTU value of fuel		(For APC use only) SCC code
		Design	Average					
Natural gas:	10^6 Cu. Ft.	Cu. Ft.	Cu. Ft.	/ / / / / / / /	/ / / / /	1,000		
#2 Fuel oil:	10^3 Gal.	Gal.	Gal.		/ / / / /			
#5 Fuel oil:	10^3 Gal.	Gal.	Gal.		/ / / / /			
#6 Fuel oil:	10^3 Gal.	Gal.	Gal.		/ / / / /			
Coal:	Tons	Lbs.	Lbs.					
Wood:	Tons	Lbs.	Lbs.	/ / / / / / / /	/ / / / /			
Liquid propane:	10^3 Gal.	Gal.	Gal.	/ / / / / / / /	/ / / / /	85,000		
Other (specify type & units): DIESEL	400 gals	14.6	12			138500		

9. If Wood is used as a fuel, specify types and estimate percent by weight of bark

10. If Wood is used with other fuels, specify percent by weight of wood charged to the burner.

11. Comments

This is an emergency generator, with internal combustion engine, that supplies power to life safety equipment in a 7 story office building. Other than emergencies, the unit is run for maintenance purposes without load, 1/2 hr per week as well as 1 hr/mth.